

# Health reform: The march is still on

PRESIDENT OBAMA is pushing for passage by month's end. Is 'reconciliation' that obscure?

BY GAIL RUSSELL CHADDOCK / STAFF WRITER

**W**ASHINGTON  
Defying the inertia of a gridlocked Congress, President Obama is calling on Democrats to move healthcare reform in March, even if it means doing so without a single Republican vote.

Republicans called a "Project Code Red," firing off "robocalls" to the districts of vulnerable Democratic lawmakers, especially those who voted against healthcare reform last year.

Mr. Obama launched a battery of presidential visits to states and districts where swing votes are to be found, beginning with Missouri and Pennsylvania.

But inside Washington, the outcome could turn on one of Congress's most obscure and controversial procedures. It's called "reconciliation" – a process that allows the Senate to ban filibusters, limit debate to 20 hours, and pass legislation by a simple majority vote.

The key is surviving the blizzard of

points of order, rulings, and appeals – and the political backlash of using a procedure intended to rein in deficits in order to move a massive reform package.

"The administration and its allies in Congress have tried repeatedly to jam this vision of healthcare through Congress without success. Now they're doubling down. They've got one more tool in their arsenal, and they're deploying it," said Senate Republican leader Mitch McConnell in a floor speech on March 4.

The Senate has used reconciliation to pass 19 budget measures since 1980, according to the Congressional Research Service. The intent of the 1974 law is to give lawmakers a fast

track to bring revenue, spending, and debt-limit levels in line with budget policies. But over time, reconciliation has been used to make broad policy changes on issues ranging from overhauling welfare to enhancing health benefits for children.

"[Healthcare reform] deserves the same kind of up-or-down vote that was cast on welfare reform, the Children's Health Insurance Program, COBRA health coverage for the unemployed, and both Bush tax cuts – all of which had to pass Congress with nothing more than a simple majority," said Obama in a White House speech on March 3.

All those bills did in fact move via

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# To trace 'loose' nukes, who ya gonna call?

U.S. GOVERNMENT builds a stable of nuclear forensic scientists, as nuclear-security concerns rise.

BY PETER N. SPOTTS / STAFF WRITER

**I**t was not Urskan Hanifi's night. He was stopped at a border checkpoint just after midnight, crossing from Romania into Bulgaria, when guards doing a routine inspection of his car turned up documents written in Russian – including one that described a shipment of uranium.

It was enough to make the guards suspicious. Popping the trunk, they found an air compressor inside, and upon closer inspection a tiny amount of highly enriched uranium, encased in a small glass vial, encased in wax, encased in a lead container.

Busted.

The uranium in this nuclear-age nesting doll wasn't weapons-grade, but it was sufficiently enriched to suggest that the batch it came from could be turned into a crude atomic bomb.

But where did it come from? And who performed a serious enrichment job on it?

Those questions, still largely unanswered in the 1999 Hanifi event, exemplify the kind of puzzle that falls to scientists involved in the small but vital field of nuclear forensics. Call it "CSI Atomic." Now, almost a decade after the 9/11 terrorist attacks, the U.S. government wants to ensure its nuclear forensics proficiency – and an adequate stable of scientists who know their way around radioactive materials.

The Nuclear Forensic and Attribution Act, signed into law last month, aims to improve coordination

among US agencies that probe cases of nuclear terrorism or nuclear smuggling. And it encourages tighter international cooperation in probing incidents beyond US soil.

But just as important, it is designed to attract a fresh crop of scientists to the field, in recognition of a looming shortage of such expertise as current scientists near retirement. Scholarships for undergrads, fellowships for PhD candidates, and research awards to professors teaching in relevant fields are the government's incentives.

In return for the PhD fellowships, graduates must work two years at a national lab or at other federal agencies that help investigate nuclear terrorism or illegal trafficking.

Federal agencies already were beefing up their ability to trace radioactive materials to their sources – either samples intercepted during an investigation or, in the worst case, residue collected after a "dirty" bomb or nuclear device detonates. Still, the new law gives these efforts a more formal status, something that is "gratifying" to William Daitch, head of the Department of Homeland Security's National Technical Nuclear Forensics Center (NTNFC) in Washington.

**SCIENCE SLEUTH:** Julie Gostic at Lawrence Livermore National Laboratory works with a flow-through chemical automation system.

Politicians from former Vice President Dick Cheney to President Obama have recently identified nuclear terrorism as America's most serious security threat. A key reason for their concern: a steady drumbeat of attempted or actual incidents of nuclear-materials trafficking.

Between 1993, when the United Nations International Atomic Energy Agency began gathering data on illegal trafficking in nuclear materials, and 2008, the agency received 336 confirmed reports of criminal activity involving nuclear material. The IAEA logged another 421 incidents of stolen or lost nuclear material worldwide. Since 1995, reported incidents have averaged 19 a year.

Moreover, the soil for nuclear mischief may be getting more fertile. Nuclear energy worldwide seems poised for expansion, and, in the West, wor-

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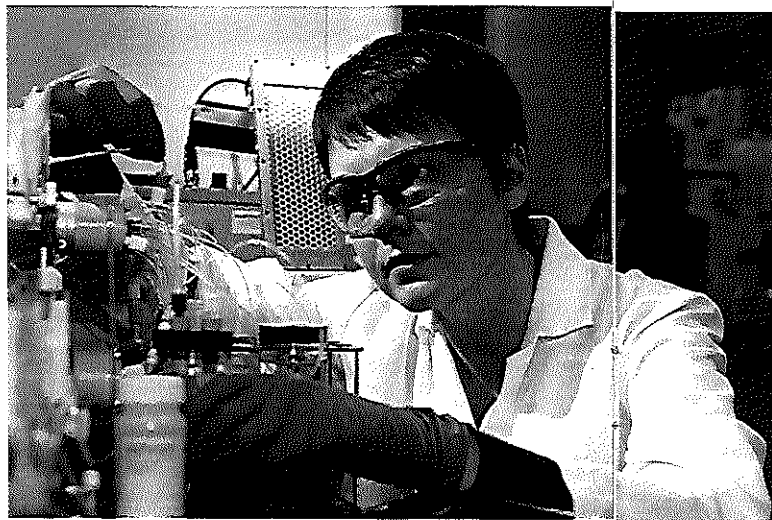
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LIVERMORE NATIONAL LABORATORY

reconciliation, but most had substantial bipartisan support.

The 1996 welfare reform passed the Republican-controlled Senate 74 to 24. Insurance coverage for unemployed workers passed as part of the Consolidated Omnibus Budget Reconciliation Act on Nov. 14, 1985, 93 to 6. The Children's Health Insurance Program passed as part of the Fiscal 1998 Budget Reconciliation, 85 to 15.

The 2001 and 2003 Bush tax cuts marked a shift toward using reconciliation to pass bills that lack broad bipartisan support. The Democratic minority saw in those votes a break from the expectation that reconciliation was to be used primarily to influence budget outcomes, not as a tool to advance a partisan agenda.

Senate Republicans didn't need to resort to reconciliation to pass the 2001 tax cut. The \$1.35 trillion bill, which reduced all income-tax rates and created a new 10 percent tax bracket, passed 62 to 38, with

12 Democrats voting with all Republicans. But by 2003, the Senate mood had turned sharply partisan, heading into a presidential election year. The second Bush tax cut, which extended tax cuts to business, narrowly passed, 51 to 49.

Republicans predict that healthcare reform, without bipartisan support and "jammed through" by reconciliation, will have no staying power. Obama says Americans don't care about procedure, only results.

"There's a way healthcare reform can pass without a single Republican vote and yet in a few years have Republican support," says Julian Zelizer, a congressional historian at Princeton University in New Jersey.

"Medicare is now a bill that Republicans support, even though many opposed it in 1965. What determines whether a bill is durable and gains support is if it's a good bill," he says. "If healthcare reform is an effective bill, you'll see those Republicans flip."

## How Julie Gostic became a nuclear 'sleuth'

HOW DOES SOMEONE decide to make a career of tracking rogue nuclear materials – or identifying the radioactive sources used in a "dirty" bomb and understanding how radioactivity moves through the environment?

In Julie Gostic's case, the motivation was the 9/11 terrorist attacks. The lubricant was a US Department of Energy research grant.

She earned an undergraduate degree in biophysics and toyed with the idea of a medical career. Then 9/11 struck.

"It was a call to duty," Dr. Gostic says. "I'm horribly uncoordinated; you'd never want to put a gun in my hand. So how could I contribute?"

The answer lay in her biophysics training. That led to a master's in radiological sciences and a job at Sandia National Laboratory. There, she worked on projects aimed at helping countries improve controls over nuclear materials in hospitals and university labs – materials that, in the wrong hands, could be used for dirty bombs. But she still couldn't answer her own questions about how radioactive materials move through the environment.

That led her to seek a PhD in radiochemistry, with Uncle Sam footing the bill. She got it last year. "Going back to school and not coming out with any debt helped me" decide to go for the PhD, she says, in a field experts say is crucial to the future of nuclear forensics – and national security.

—Peter N. Spotts

ries abound about Iran's nuclear program. The ongoing US-Russia effort to retire more nuclear warheads, if successful, may increase the risk that decommissioned nuclear material could be stolen if adequate safeguards are not in place.

At the same time, a shortage of nuclear forensics experts looms, experts say, citing unclassified reports on the field and a soon-to-be-released study from the National Academy of Sciences.

Indeed, these days just 60 researchers – mainly at the national labs – have experience in nuclear forensics, and none of them works full time on it, says Benn Tannenbaum of the Center for Science, Technology, and Security Policy of the American Association for the Advancement of Science (AAAS).

Why so few? Many people with the skills to conduct nuclear forensic investigations opt for higher-paying jobs in other sectors, such as nuclear medicine or nuclear power.

Then, too, the US government ended underground nuclear-weapons testing in 1992, reducing the demand for a corps of full-time scientists who analyze test results and devise technologies to increase the precision and speed of that analysis, says Mr. Daitch at NTNFC.

But there's much work yet to do, says the AAAS's Dr. Tannenbaum. "We're still not at the limits of physics as far as how accurate our measurements can be or how fast [they] can be taken."

To attract young scientists into radiochemistry and nuclear forensics, the Lawrence Livermore National Laboratory in Livermore, Calif., finds summer interns to be a promising avenue for piquing the interest of undergraduates, says Nancy Hutcheon, who administers the lab's program, funded by the NTNFC. At least six students "are doing graduate-thesis work that in some way is involved with the nuclear forensics arena," she says.

One is Greg Brennecka, an Arizona State University student working toward a PhD in isotope geochemistry – a field that studies the abundance of chemical elements and their isotopes, including radioactive isotopes. Mr. Brennecka has spent several summers interning with the lab's nuclear forensic scientists. Once he finishes at ASU,

## Big bills the Senate has approved by a 'simple majority'

President Obama, pushing hard to finish healthcare reform, on March 2 cited major bills the Senate has passed 'with nothing more than a simple majority,' rather than relying upon a 60-vote supermajority. That's true, but most of them had a good measure of support from the minority party. Here are the bills the president named and their levels of bipartisan backing.

YEAR	LEGISLATION	SENATE VOTE IN FAVOR
1985	COBRA health coverage for the unemployed	R-51, D-42
1996	Welfare reform	R-51, D-23
1997	Children's Health Insurance Program	R-43, D-42
2001	Bush tax cut	R-50, D-12
2003	Bush tax cut	R-48, D-3

SOURCE: Congressional record

RICH CLABAUGH/STAFF

he says, he may wind up at another university doing research. "But over the long term, I would like to do something like Livermore's nuclear forensics program."

One of his projects there: developing ways to help pinpoint which of the 150 uranium mines that ever existed on the planet a sample came from.

ON TV, FORENSIC SCIENTISTS of every ilk produce results in no time, but the reality is slower – and Daitch acknowledges the potential for enormous pressure for quick results. Nuclear forensic scientists are working toward that end, but the Hanifi case illustrates the difficulties.

Nine months after Bulgaria confiscated the vial of uranium, the US requested the sample. It took another nine months for Lawrence Livermore scientists to finish their analysis. Physical traits of the sample indicate it came from outside the US. Traces of paper pointed to Europe as the source for the trees. The glass vial appeared to be similar to those used at nuclear-fuel reprocessing plants to archive samples.

As for Hanifi? He served a short prison sentence in Bulgaria and was fined the equivalent of \$900. Soon after his release, Hanifi went home to Moldova and reportedly died a short time later under mysterious circumstances.

Patrick Grant, with the lab's Forensics Science Center, says the material's source remains uncertain, although some reports suggest that the uranium came from a nuclear-fuel reprocessing facility in Russia. In effect, it is a nuclear "cold case."

Still, there are promising approaches to speeding an investigation.

One is to use high-speed supercomputers to model potential terrorist nuclear devices. The intent is to build a virtual archive of devices against which investigators can compare what they may one day find in the field.

Another is to use lasers to speed the analysis of a sample. Typically, samples must be first dissolved in a fluid, which can take hours, explains Michael Carter, who heads counterterrorism research at Lawrence Livermore. Laser preparation may make samples available for analysis much faster.